

Appl.No. 09/731,395

Amendment dated February 2, 2004

Reply to Office Action dated August 1, 2003

AMENDMENTS TO THE CLAIMS:

1. (currently amended) A laundry detergent or cleaning product, comprising an active ingredient that comprises a particulate rinse aid having particle sizes of between 0.1 mm and 35 mm, wherein the active ingredient is compounded with an LCST polymer.

2. (currently amended) A laundry detergent or cleaning product, comprising an active ingredient that comprises a particulate rinse aid having particle sizes of between 0.1 mm and 35 mm, wherein the active ingredient is compounded at least in part with an LCST polymer, and wherein a fraction of the active ~~substance~~ ingredient has been applied to a carrier material.

3. (previously presented) The laundry detergent or cleaning product as claimed in claim 2, wherein the carrier material is one or more selected from the group consisting of zeolites, bentonites, silicates, disilicates, carbonates, hydrogen carbonates, sulfates, phosphates, and synthetic polymers.

4. (canceled)

5. (previously presented) The laundry detergent or cleaning product as claimed in claim 1, wherein the active ingredient is at least in part coated with an LCST polymer.

6. (previously presented) The laundry detergent or cleaning product as claimed in claim 1, wherein the active ingredient is at least in part embedded in a matrix comprising an LCST polymer.

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7. (previously presented) The laundry detergent or cleaning product as claimed in claim 1, wherein the LCST polymer is selected from the group consisting of cellulose derivatives, mono- or di-N-alkylated acrylamides, copolymers of mono- or di-N-substituted acrylamides with acrylamides and/or acrylates and/or acrylic acids, polyvinyl alcohol and copolymers thereof, polyvinyl methyl ethers, polyvinylcaprolactam, polyvinylpyrrolidone and its copolymers, polyisopropylloxazoline, polyamino acids, proteins, and combinations thereof.

8. (previously presented) The laundry detergent or cleaning product as claimed in claim 7, wherein the LCST polymer is selected from the group consisting of polyvinyl alcohol-vinyl acetate copolymers, cellulose ethers, polyisopropylacrylamide, copolymers of polyisopropylacrylamide, and blends of these substances.

9. (previously presented) The laundry detergent or cleaning product as claimed in claim 1, wherein the lower critical separation temperature of the LCST polymer is between 20°C and 100°C.

10. (previously presented) The laundry detergent or cleaning product as claimed in claim 9, wherein the lower critical separation temperature of the LCST polymer is between 30°C and 90°C.

11. (previously presented) The laundry detergent or cleaning product as claimed in claim 1, wherein the active ingredient compounded with the LCST polymer is at least in part coated with a coating substance that dissolves or melts at a temperature above the lower critical separation temperature of the LCST polymer or that has a retarded solubility in water.

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12. (previously presented) The laundry detergent or cleaning product as claimed in claim 11, wherein the coating substance comprises one or more hydrophilic polymers.

13. (previously presented) The laundry detergent or cleaning product as claimed in claim 1, wherein the active ingredient is at least in part coated with the LCST polymer.

14. (previously presented) The laundry detergent or cleaning product as claimed in claim 13, wherein the active ingredient is at least in part coated with a layer of a water-soluble polymer, which layer of water-soluble polymer is at least in part coated by the LCST polymer coating.

15. (original) The laundry detergent or cleaning product as claimed in claim 14, wherein the layer of water-soluble polymer comprises polyvinyl alcohol.

16. (previously presented) The laundry detergent or cleaning product as claimed in claim 1, which is in solid to gel form.

17. (previously presented) The laundry detergent or cleaning product as claimed in claim 1, comprising one or more active ingredients selected from the group consisting of enzymes, fragrances, dyes, fluorescence agents, optical brighteners, shrink preventatives, antcrease agents, antimicrobial active substances, germicides, fungicides, antioxidants, antistatics, easy-iron agents, repellency and impregnating agents, UV absorbers, and any mixtures thereof.

18. (previously presented) The laundry detergent or cleaning product as claimed in claim 1, which is a machine dishwashing composition and comprises, as the active

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ingredient that has been compounded with the LCST polymer, one or more substances selected from the group consisting of builders, cobuilders, acids, amidosulfonic acid, citrate, hydrogen sulfate, surfactants, fragrances, dyes, bleaches, complexing agents, soil repellents, complexing surfactants, and any mixtures thereof.

19.-20. (canceled)

21. (previously presented) The laundry detergent or cleaning product as claimed in claim 18, which has at least two phases A and B, wherein the phase A comprises a carrier material and the active ingredient compounded with the LCST polymer.

22. (canceled)

23. (previously presented) The laundry detergent or cleaning product as claimed in claim 21, wherein the active ingredient compounded with the LCST polymer comprises one or more substances selected from the group consisting of surfactants, builder/cobuilders, bleaches, bleach activators, corrosion inhibitors, scale inhibitors, silver protectants, and fragrances.

24. (previously presented) The laundry detergent or cleaning product as claimed in claim 21, wherein phase B is a base tablet comprising customary ingredients for machine dishwashing compositions.

25. (previously presented) The laundry detergent or cleaning product as claimed in claim 21, wherein phase B comprises a plurality of individual phases.

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26. (previously presented) The laundry detergent or cleaning product as claimed in claim 3, wherein the carrier material is one or more selected from the group consisting water glasses, alkali metal carbonates, polyethylene glycols, polycarboxylates, crosslinked polycarboxylates, polyvinyl alcohols with different degrees of hydrolysis, polyvinyl acetate, and organic oligocarboxylic acids that are solid at room temperature.

27. (currently amended) A process of laundering or cleaning textile or hard surface, comprising the steps of forming a laundry detergent or cleaning product at least in part by compounding an active ingredient comprising a particulate rinse aid having particle sizes of between 0.1 mm and 35 mm with an LCST polymer, forming a wash liquor comprising the laundry detergent or cleaning product, contacting the textile or surface with the wash liquor at a temperature above the critical separation temperature of the LCST polymer, whereby the active ~~substance~~ ingredient compounded with the LCST polymer remains at least partly unchanged following exposure to the temperature above the critical separation temperature of the LCST polymer, and contacting the remaining unchanged active ~~substance~~ ingredient compounded with the LCST polymer with a liquid medium at a temperature at or below the critical separation temperature of the LCST polymer, whereby the active ~~substance~~ ingredient is released into the liquid medium.

28. (previously presented) The process of claim 27, wherein the temperature above the critical separation temperature of the LCST polymer is between 20°C and 150°C.

29. (previously presented) The process of claim 28, wherein the temperature above the critical separation temperature of the LCST polymer is between 30°C and 90°C.

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30. (previously presented) The laundry detergent or cleaning product as claimed in claim 10, wherein the lower critical separation temperature of the LCST polymer is between 30°C and 50°C.

31. (previously presented) The laundry detergent or cleaning product as claimed in claim 12, wherein the coating substance comprises compounds selected from the group consisting of polyvinyl alcohols, polyethylene glycols, water-soluble polysaccharides, water-soluble polyurethanes, xanthan, guar gum, alginates, chitosan, carrageenan, polysulfonates, shellac, polyacrylates and copolymers thereof, and any mixtures thereof.

32. (previously presented) The laundry detergent or cleaning product as claimed in claim 1, in the form of a powder, granule, extrudate, single-phase or multiphase tablet, capsule of any desired form, or pouch.

33. (previously presented) The laundry detergent or cleaning product as claimed in claim 20, wherein the particulate rinse aid has particle sizes of between 1.0mm and 20 mm.

34. (previously presented) The laundry detergent or cleaning product as claimed in claim 20, wherein the particulate rinse aid has particle sizes of between 2mm and 20 mm.

35. (previously presented) The laundry detergent or cleaning product as claimed in claim 23, wherein the active ingredient compounded with the LCST polymer comprises a rinse aid surfactant.

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36. (previously presented) The process of claim 27, wherein the laundry detergent or cleaning product is a machine dishwashing composition and comprises, as the active ingredient that has been compounded with the LCST polymer, one or more substances selected from the group consisting of builders, cobuilders, acids, amidosulfonic acid, citrate, hydrogen sulfate, surfactants, fragrances, dyes, bleaches, complexing agents, soil repellents, surfactants, and any mixtures thereof, said machine dishwashing composition having at least two phases A and B, wherein the phase A comprises a carrier material and the active ingredient compounded with the LCST polymer, and wherein the exposure to the temperature above the critical separation temperature of the LCST polymer occurs in a main wash cycle of an automatic dishwasher, and wherein the active ingredient compounded with the LCST polymer is released into the liquid medium in a cycle following the main wash cycle.